Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24. (canceled)

Claim 25. (previously presented) A method for scanning an object with a scanner having at least one two dimensional electronic image converter, at least one optical element imaging the object on the electronic image converter, and first and second beam sources for illuminating the object, comprising the steps of:

a) illuminating said object with said first beam source at a first illumination level and substantially simultaneously obtaining a first image of the object with the electronic image converter at a first level of received beam energy;

b) illuminating said object with said second beam source and substantially simultaneously obtaining a second image of said object with said electronic image converter at a second level of received beam energy different from said first level;

c) wherein said steps a) and b) are performed in succession to thereby obtain two consecutive images of the object with the electronic image converter at different levels of received beam energy.

Claim 26. (previously presented) The method of claim 25, wherein an optical means for influencing the effective amount of beam energy from at least one of said first and second beam sources is placed in an optical path between said at least one beam source and said object.

Claim 27. (previously presented) The method of claim 25, wherein an optical means for influencing the effective amount of beam energy from at least one of said first and second beam sources is placed in an optical path between said object and said electronic image converter.

Claim 28. (previously presented) The method of claim 25, wherein output signals of said electronic image converter are digitized and made available to a computer data processing system separate from said scanner.

Claim 29. (previously presented) The method of claim 28, wherein image data from said first and second images is processed by image processing algorithms in said computer data processing system to generate three-dimensional information as to said object.

Claim 30. (previously presented) The method of claim 25, wherein said electronic image converter operates at a refresh rate, and wherein said refresh rate is substantially in synchronism with said steps of illumination.

Claim 31. (previously presented) The method of claim 30, wherein the operation of said first and second beam sources is controlled by a control unit, said control unit synchronizing the operation of said first and second beam sources and said electronic image converter such that said first and second beam sources illuminate said object at a rate substantially equal to said refresh rate.

Claim 32. (previously presented) The method of claim 25, wherein at least one of said first and second beam sources projects a pattern onto said object.

Claim 33. (previously presented) The method of claim 25, wherein at least one of said first and second beam sources comprises a source of high brightness having an illumination time of between 0.001 and 0.01 seconds.

Claim 34. (previously presented) The method of claim 33 wherein said source of high brightness comprises a flash lamp.

Claim 35. (previously presented) The method of claim 25, wherein said first and second beam sources illuminate said object from different spatial directions.

Claim 36. (previously presented) The method of claim 35, wherein said first and second beam sources comprise beam sources emitting radiation in different portions in the electromagnetic spectrum.

Claim 37. (previously presented) A method for scanning an object with a scanner having at least two two-dimensional electronic image converters, at least one optical element imaging the object on the electronic image converters, and first and second beam sources for illuminating the object, comprising the steps of:

a) illuminating said object with said first beam source at a first illumination level and substantially simultaneously obtaining a first image of the object with a first electronic image converter at a first level of received beam energy;

b) illuminating said object with said second beam source and substantially simultaneously obtaining a second image of said object with a second electronic image converter at a second level of received beam energy different from said first level;

c) wherein said steps a) and b) are performed in succession to thereby obtain two consecutive images of the object with said electronic image converters at different amounts of received beam energy.

Claim 38. (previously presented) The method of claim 37, wherein said first beam source comprises a source of visible spectrum radiation and wherein said second beam source comprises a source of infra-red radiation.

Claim 39. (previously presented) The method of claim 37, wherein said first beam source comprises a source of visible spectrum radiation and wherein said second beam source comprises a source of ultraviolet radiation.

Claim 40. (previously presented) A scanner for scanning an object and obtaining three-dimensional information about the surface of said object, comprising:

a) at least one two-dimensional electronic image converter;

b) at least one optical element imaging said object on said electronic image converter;

c) a first beam source for illuminating said object and a second beam source for illuminating said object,

d) wherein said first beam source illuminates said object and substantially simultaneously a first image of the object is obtained by said at least one electronic image converter, said first image obtained from incident radiation at a first level of received beam energy;

e) wherein said second beam source illuminates said object and substantially simultaneously a second image of said object is obtained by said at least one electronic image converter, said second image obtained from incident radiation at a second level of received beam energy different from said first level; and

f) wherein said illumination of said object and the generation of said first and second images are performed in succession such that said electronic image converter thereby obtains two consecutive images of the object at different levels of received beam energy.

Claim 41. (previously presented) The scanner of claim 40, wherein said electronic image converter comprises a charge-coupled device array.

Claim 42. (previously presented) The scanner of claim 40, wherein said scanner further comprises a prism adapted for directing radiation from said beam sources in the direction of said object, said prism sized and shaped so as to have a portion thereof fit into the oral cavity of a human and enable said portion to be moved relative to anatomical structures within said oral cavity.

Claim 43. (previously presented) The scanner of claim 40, wherein said at least one of said beam sources comprises a flash lamp.

Claim 44. (previously presented) The scanner of claim 42, wherein the scanner further comprises a frame housing said first and second beam sources and wherein said prism is rigidly connected to said frame.

Claim 45. (previously presented) The scanner of claim 44, wherein said optical element comprises at lease one lens element fixed with respect to said frame.

Claim 46. (previously presented) The scanner of claim 44, wherein said carrier further comprises at least one optically reflective surface reflecting radiation from said at least one beam source towards said object.

Claim 47. (previously presented) The scanner of claim 46, wherein said reflective surface comprises a peripheral internal surface of said carrier.

Claim 48. (previously presented) The scanner of claim 46, wherein said reflective surface comprises at least two internal surfaces of said carrier, and wherein radiation from said beam sources undergoes total internal reflection in a path between said beam sources and said object.

Claim 49. (previously presented) The scanner of claim 46, wherein said reflective surface further comprises a mirror.

Claim 50. (previously presented) The scanner of claim 44, wherein said carrier is releasable from said frame to thereby permit said carrier to be separately sterilized and/or disinfected from said frame.

Claims 51-54. (canceled)

Claim 55. (previously presented) A method for scanning an object with a scanner having at least one two-dimensional electronic image converter, at least one optical element imaging the object on the electronic image converters, and first and second beam sources for illuminating the object, comprising the steps of:

a) illuminating said object with said first beam source with radiation predominantly in a first portion of the electromagnetic spectrum and substantially simultaneously obtaining a first image of the object with said at least one electronic image converter;

b) illuminating said object with said second beam source with radiation predominantly in a second portion of the electromagnetic spectrum different from said first portion and substantially simultaneously obtaining a second image of said object with said at least one electronic image converter;

c) wherein said steps a) and b) are performed in succession to thereby obtain two consecutive images of the object with said at least one electronic image converter at two different portions of the electromagnetic spectrum.

Claim 56. (previously presented) The method of claim 55, wherein said first portion of the electro-magnetic spectrum comprises the visible spectrum and wherein the second portion of the electromagnetic spectrum comprises either the ultraviolet or infrared portions of the electromagnetic spectrum.

Claim 57. (previously presented) The method of claim 55, wherein at least one of said first and second beam sources projects a pattern onto said object.

Claim 58. (previously presented) The method of claim 55, wherein said first and second beam sources illuminate said object from different spatial directions.